

Claims:

1. A collapsible ladder comprising:
  - a pair of opposing and substantially parallel rails; and
  - a plurality of rungs being elongate and movably connected at or adjacent opposing ends to respective of the pair of rails whereby the ladder can be moved from an operational condition wherein the parallel rails are laterally separated from one another and disposed generally perpendicular to the rungs to permit access to the ladder, to a collapsed condition wherein the rails on movement relative to the rungs locate adjacent one another to prevent access to the ladder.
- 10 2. A collapsible ladder as defined in claim 1 also comprising locking means being operatively coupled to the pair of rails to prevent their separation in the collapsed condition.
- 15 3. A collapsible ladder as defined in claim 2 wherein the locking means includes a locking pin connected to one of the rails and being operable to releasably engage the locking pin with the ladder in the collapsed condition.
4. A collapsible ladder as defined in claim 3 where in the locking pin is at one end fixed to the rail and at or adjacent an opposite end has a hole configured to be engaged by a plunger of the locking mechanism.
5. A collapsible ladder as defined in claim 4 wherein the ladder in the collapsed condition the locking pin is designed to pass through an opening in an underlying of the rungs together with an aperture in an opposing of the rails wherein the hole in the locking pin is exposed for engagement by the plunger.
- 20 6. A collapsible ladder as defined in any one of the preceding claims wherein the plurality of rungs are each pivotally connected at opposing ends to respective of the pair of rails to provide racking of the rungs on movement from the operational to the collapsed conditions.
- 25 7. A collapsible ladder as defined in claim 6 wherein this pivotal connection is provided by a pivot pin coupled to the rail and each of the rungs.
8. A collapsible ladder as defined in any one of the preceding claims wherein the pair of rails are each fabricated of channel-section members having their respective flanges aligned with and directed toward one another, the rungs being configured to nest within the channel-section rails with the ladder in the collapsed condition.

9. A collapsible ladder in claim 8 wherein the rungs are also fabricated of channel-section members having a width dimension across opposing flanges of less than the corresponding internal width dimension of the rails.
10. A collapsible ladder as defined in any one of the preceding claims further comprising anchoring means connected to one or both of the pair of rails and being adapted to permanently or temporarily mount the ladder to a structure.
11. A collapsible ladder as defined in claim 10 wherein the anchoring means includes a bracket connected at a lower end of one of the rails and adapted to fix to a lower part of the structure, and a locating member connected adjacent an upper end of the one of the rails and adapted to anchor to an elevated part of the structure.
12. A collapsible ladder as defined in claim 11 wherein the bracket is pivotally coupled to the rail to permit variations in the pitch of the ladder, and the locating member includes a locating pin being adapted to removably locate in a corresponding recess in the structure.
13. A collapsible ladder as defined in any one of the preceding claims additionally comprising at least one handle connected to one of the rails and positioned such that the ladder in its collapsed condition is evenly weighted about said handle.
14. A collapsible ladder as defined in any one of the preceding claims wherein the collapsible ladder at and adjacent its upper end is free of the ladder rungs thus providing unobstructed access between the pair of rails.
15. A collapsible ladder as defined in any one of the preceding claims wherein the collapsible ladder is fabricated from roll-formed steel.

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

REC'D 23 DEC 2003

PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference DGC021337682	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No.  PCT/AU03/00469	International Filing Date (day/month/year)  17 April 2003	Priority Date (day/month/year)  19 April 2002
International Patent Classification (IPC) or national classification and IPC  Int. Cl. 7 E06C 1/383, 7/42, 7/48		
Applicant LADDALOC PTY LTD et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheet(s).

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 19 November 2003	Date of completion of the report 12 December 2003
Name and mailing address of the IPEA/AU  AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  <b>D.R. LUM</b> Telephone No. (02) 6283 2544

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU03/00469

**I. Basis of the report**

## 1. With regard to the elements of the international application:\*

the international application as originally filed.

the description, pages 1-6, as originally filed,  
pages , filed with the demand,  
pages 7, received on 26 September 2003 with the letter of 26 September 2003

the claims, pages , as originally filed,  
pages , as amended (together with any statement) under Article 19,  
pages , filed with the demand,  
pages 8, 9, received on 26 September 2003 with the letter of 26 September 2003

the drawings, pages 1/5 - 5/5 , as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of

the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

the language of publication of the international application (under Rule 48.3(b)).

the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.

filed together with the international application in computer readable form.

furnished subsequently to this Authority in written form.

furnished subsequently to this Authority in computer readable form.

The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4.  The amendments have resulted in the cancellation of:

the description, pages

the claims, Nos.

the drawings, sheets/fig.

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU03/00469

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-12	YES
	Claims	NO
Inventive step (IS)	Claims 1-12	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-12	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**

Claims 1-12 meet the criteria set forth in PCT Article 33(2) for novelty. The prior art published before the priority date does not disclose a locking means being operatively coupled to the pair of rails to prevent their separation in the collapsed state, the locking means including a locking pin rigidly connected to one of the rails and a locking mechanism mounted to another of the rails and being operable to releasably engage the locking pin with the ladder in the collapsed condition.

The closest art of GB 2099059 discloses a locking mechanism which includes a pin which is not fixed rigidly to one of the rails and which pin is inserted into cooperating apertures in the rail in the collapsed stated.